

FLORIDA KEYS CARRYING CAPACITY STUDY

Ricardo Calvo, URS Corporation

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The Carrying Capacity Analysis/Impact Assessment Model (CCIAM) is a spatial decision-making, planning, and analysis tool that applies raster, vector, and tabular modeling techniques to assess the impacts of land development activities on the natural and social systems of the Florida Keys. The graphic user interface prompts the user to define a scenario according to the location, intensity, configuration and type of land use change. The effects of the development or restoration activity on terrestrial habitat and species, storm water, wastewater, groundwater, marine water quality are calculated using the latest GIS technologies and automation techniques. The resulting changes in population, economic conditions, demand for services, and infrastructure are also determined. Outputs are organized into two HTML reports for use in the Monroe County comprehensive land planning process. The Routine Planning Tool (RPT) is an ArcIMS application that provides wide access to information produced in the CCIAM. It serves selected information from the CCIAM and basic spatial analysis tools to planners and the public.

A user needs assessment and data suitability studies were conducted to assure successful implementation and utilization of both the CCIAM and RPT. The need's assessment included all aspects of information technology, and user interface functionality. Seven land use scenarios have been analyzed using the CCIAM and the results reported to Monroe County, the Florida Department of Community Affairs, and the US Army Corps of Engineers.